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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,669	09/27/2001	Jeffrey Soon Beng Sim	934.134US1	2850

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EXAMINER
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DUNCAN, MARC M

ART UNIT	PAPER NUMBER
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2113

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/965,669

Applicant(s)

BENG SIM ET AL.

Examiner

Marc M Duncan

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-7,9-17,19 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21-25 is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9,10,12,14-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 21-25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **FINAL REJECTION**

### ***Status of the Claims***

Claims 1, 4-6, 9, 12 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamamoto et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Takagi et al.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being obvious over Yamamoto et al. in view of Aoki.

Claims 3, 11 and 13 are objected to.

Claims 21-25 are allowed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-6, 9, 12 and 14-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamamoto et al.

Regarding claim 1:

Yamamoto teaches obtaining at least one segment of a defect table from a data storage medium of the mass storage device, wherein the defect table is

Art Unit: 2113

partitioned into a plurality of segments in Fig. 4, par. 0026 lines 1-2 and par. 0093 lines 2-4. It can be seen in Fig. 4 that the defect list is separated into two distinct segments. In addition, a table is partitioned into a plurality of segments inherently. Each entry in a table is a segment.

Yamamoto teaches copying the at least one of the plurality segments of the defect table into a memory in par. 0093 lines 2-4. RAM is a memory.

Regarding claim 4:

Yamamoto teaches determining that a size of a segment is not greater than an allocated memory in paragraph 0093. The full defect list is stored in the RAM, therefore it is inherently determined that the size of a segment is not greater than an allocated memory.

Yamamoto teaches copying the segment into the memory in paragraph 0093.

Regarding claim 5:

Yamamoto teaches obtaining an application of the mass storage device in paragraph 0033. Recording timewise continuous data is an application of the mass storage device.

Yamamoto teaches committing a portion of the memory to the application in paragraph 0093. The RAM is committed to the application of the mass storage device. It is used to store the defect list utilized in processing the continuous data.

Regarding claim 6:

Art Unit: 2113

Yamamoto teaches obtaining a quantity of multimedia streams in paragraph 0081.

Yamamoto teaches committing a portion of the memory to each multimedia stream in paragraphs 0085-0087 and paragraph 0093. The RAM is committed to processing the continuous data, which is made up of the multimedia streams. The RAM is, therefore committed to each multimedia stream.

Regarding claim 9:

Yamamoto teaches wherein the mass storage device further comprises a disc drive in Fig. 1.

Regarding claim 12:

Yamamoto teaches a data storage medium in Fig. 1.

Yamamoto teaches a memory in paragraph 0093.

Yamamoto teaches a defect table listing the defects on the data storage medium, wherein the defect table is partitioned into a plurality of segments in Fig. 4, par. 0026 lines 1-2 and par. 0093 lines 2-4. It can be seen in Fig. 4 that the defect list is separated into two distinct segments. In addition, a table is partitioned into a plurality of segments inherently. Each entry in a table is a segment.

Yamamoto teaches a data storage controller communicatively coupled to the data storage medium and the memory in Fig. 1. The drive has a hard drive controller.

Art Unit: 2113

Yamamoto teaches obtaining at least one segment of the defect table from the data storage medium par. 0093 lines 2-4.

Yamamoto teaches copying the at least one segment of the defect table into a memory in par. 0093 lines 2-4.

Regarding claim 14:

Yamamoto teaches determining that a size of a segment is not greater than the memory in paragraph 0093. The full defect list is stored in the RAM, therefore it is inherently determined that the size of a segment is not greater than an allocated memory.

Yamamoto teaches copying the segment into the memory in paragraph 0093.

Regarding claim 15:

Yamamoto teaches wherein the plurality of segments further comprise more than one segment that are physically distributed throughout the data storage medium in Fig. 4, par. 0026 lines 1-2 and par. 0093 lines 2-4. It can be seen in Fig. 4 that the defect list is separated into plural segments that are physically distinct and distributed from each other.

Regarding claim 16:

Yamamoto teaches obtaining an application of the mass storage device in paragraph 0033. Recording timewise continuous data is an application of the mass storage device.

Yamamoto teaches committing a portion of the memory to the application in paragraph 0093. The RAM is committed to the application of the mass storage

Art Unit: 2113

device. It is used to store the defect list utilized in processing the continuous data.

Regarding claim 17:

Yamamoto teaches the application comprising a multimedia application in paragraph 0081.

Yamamoto teaches obtaining a quantity of multimedia streams in paragraph 0081.

Yamamoto teaches committing a portion of the memory to each multimedia stream in paragraphs 0085-0087 and paragraph 0093. The RAM is committed to processing the continuous data, which is made up of the multimedia streams. The RAM is, therefore committed to each multimedia stream.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 2113

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Takagi et al.

Regarding claim 7:

The teachings of Yamamoto are outlined above.

Yamamoto further teaches obtaining a quantity of defects found during a manufacturing test process of the mass storage device in paragraphs 0019 and 0020.

Yamamoto does not explicitly teach committing a portion of the memory to the quantity of defects. Yamamoto does, however, teach a primary defect list and slipping replacement. Yamamoto further teaches that defect management information is copied into the memory, wherein the memory has been committed to the defect management information in paragraph 0093.

Takagi explicitly teaches the management information containing the primary defect list in Fig. 2 and col. 4 lines 20-24.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the management information of Takagi with the memory allocation for management information of Yamamoto.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because Yamamoto expresses a need for management information and for dealing with primary defects detected during



Art Unit: 2113

manufacturing. Takagi meets the express need of Yamamoto with a method of dealing with primary defects.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being obvious over Yamamoto et al. in view of Aoki.

Regarding claim 10 and 19:

The teachings of Yamamoto are outlined above.

Yamamoto does not explicitly teach the volatile memory device being a cache. Yamamoto does, however, teach the use of a volatile memory device to store a defect buffer.

Aoki teaches the volatile memory device being a cache in Fig. 2.

It would have been obvious to one of ordinary skill in the art at the time of invention to combine the cache of Aoki with the volatile memory of Yamamoto.

One of ordinary skill in the art at the time of invention would have been motivated to combine the teachings because the use of a cache increases speed, an inherent need in the A/V system of Yamamoto.

#### ***Allowable Subject Matter***

Claims 3, 11 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Applicant's arguments filed 12/16/04 have been fully considered but they are not persuasive.

Art Unit: 2113

Regarding applicant's argument that Yamamoto does not teach the defect table partitioned into a plurality of segments. The examiner respectfully disagrees. The defect table is stored at multiple portions of the disc surface. This clearly shows a plurality of segments. To partition is simply to divide. The defect table is divided into two separate copies in two separate sections. Additionally, a defect list is inherently partitioned into a plurality of segments. A defect list contains a plurality of entries. Each entry is clearly a separate segment partitioned from the other segments. The rejection is maintained.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

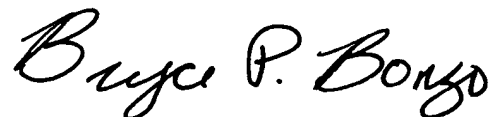
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc M Duncan whose telephone number is 571-272-3646. The examiner can normally be reached on M-F 9:00-5:00.

Art Unit: 2113

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on 571-272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

md



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